

REMARKS

In the Office Action of October 29, 2004, claims 6, 9-14, and 17-20 were objected to as being dependent upon a rejected base claim but were indicated as being allowable if rewritten in independent form. Additionally, claims 1-5, 7, and 8 were rejected as being anticipated by U.S. Pat. No. 6,177,034 (hereinafter Ferrone). Furthermore, claims 15 and 16 were rejected as being anticipated by U.S. Pat. No. 5,432,703 (hereinafter Lynch). Still further, claim 15 and 16 were rejected as being anticipated by U.S. Pat. No. 5,376,132 issue to Caspers (hereinafter Caspers).

Regarding the objection to claims 10, Applicant notes that claim 10 is an independent claim and therefor does not depend from any rejected base claim. Thus, because the subject matter of claim 10 is allowable, Applicant requests that the objection to claim 10 be withdrawn. Additionally, because claims 11-14 each depend only from claim 10, it follows then that claim 11-14 are also allowable in their present form and Applicant therefore requests that the objection to claims 11-14 be withdrawn.

Applicant has herein amended claim 1 to correct a typographical error and to clarify the claim's scope. Additionally, Applicant submits the ensuing remarks in support of the allowability of the rejected claims.

Claims 1-5, 7, and 8 Are Neither Anticipated by Ferrone Nor Made Obvious By The Prior Art

Independent claim 1 requires, among other things, a step of forming at least a portion of the socket out of physical material using a digitally controlled layered manufacturing technique driven by the digital representation of the socket. In the Office

Action, it is suggested that Ferrone discloses the forming of a socket out of physical material using a digitally controlled layered manufacturing technique. However, as recited in claim 1, the socket of the present invention is a portion of a prosthetic limb. In contrast, Ferrone discloses the use of a digitally controlled layered manufacturing technique to form "a negative mold." Column 9, lines 31-35. Although the negative mold of Ferrone is shown having a cavity, this negative mold is not a socket portion of a prosthetic limb, rather the negative mold is used to form a positive mold of synthetic skin-like material. Column 10, lines 8-10. In Ferrone, the skin-like material forms a portion of a prosthetic limb, but the negative mold does not. These differences are significant in that the present invention, at least as set forth in claim 1, allows for the formation of a prosthetic device without any step of molding (of course some molding could occur if so desired). Thus time and material can be saved by using this aspect of present invention to form a prosthetic limb.

Because Ferrone fails to disclose any step of forming at least a portion of the socket of a prosthetic limb out of physical material using a digitally controlled layered manufacturing technique, Farrone fails to anticipate claim 1. Thus, because claim 1 is not anticipated by Farrone, the anticipation rejection of claim 1 is improper and should be withdrawn. Additionally, for these same reasons, it follows that claims 2-5, 7, and 8, being dependent upon claim 1, are also not anticipated by nor obvious in view of Farrone and that the anticipation rejections of these claims are also improper and should be withdrawn.

Claims 15 and 16 Are Not Anticipated by Lynch

Claim 15 requires, among other things, a step of forming a socket having a cavity that is defined by an interior surface. Moreover, claim 15 requires the forming of the socket to occur in a manner such that the interior surface of the socket has a contour that is dependent upon the exterior surface contour of the liner, and to occur without a process of intentionally rectifying the contour of the interior surface for the purpose of altering the bearing characteristics between the socket and the liner. Still further, claim 15 requires a step of attaching the socket of the prosthetic limb to the residual limb by positioning the residual limb with the liner positioned thereon at least partially into the cavity of the socket.

Notably, in the method of claim 15, the liner is utilized both to at least partially define the interior surface of the socket, and to attach the socket of the prosthetic limb to the residual limb. Although the socket disclosed in Lynch has an interior surface that is dependant upon a stocking, Lynch does not disclose using that stocking to attach the socket to the residual limb. In other words, the stocking disclosed in Lynch is used only to facilitate the formation of the socket. Thus, the stocking disclosed in Lynch defers from the liner of claim 15 and is not a liner of any sort. As such, Lynch fails to disclose the use of a liner as set forth in claim 15.

Clynnch also fails to disclose any forming of a socket that occurs without a process of intentionally rectifying the contour of the interior surface for the purpose of altering the bearing characteristics between the socket and a liner. In fact, Lynch

teaches that such altering is necessary.¹ To this end, most of the description in Lynch and each of the claims of Lynch are directly to processes of intentionally rectifying the contour of the interior surface of a socket for the purpose of altering bearing characteristics. Thus, Lynch not only fails to disclose or suggest the method of claim 15, but also specifically and explicitly teaches away from the method of claim 15.

For each of the above mentioned reasons, Lynch fails to disclose each and every limitation of claim 15, and therefore fails to anticipate claim 15. As such, Applicant respectfully submits that the anticipation rejection of the claim 15 under Lynch is improper and should be withdrawn. Likewise, because claim 16 is dependant upon claim 15, for these same reasons, it follows then that claim 16 is also not anticipated by nor obvious in view of Lynch.

Claims 15 and 16 Are Neither Anticipated by Caspers Nor Made Obvious By The Prior Art

Caspers discloses a method of forming a liner and a socket using several molds, of both positive and negative types. Once the liner disclosed in Caspers has been formed, it is placed on the residual limb and is utilized to form a positive mold of the socket portion of the prosthetic limb. Column 8, line 67, to Column 9, line 9. However, like Lynch, Caspers teaches that a process of intentionally rectifying the contour of the interior surface of the socket for the purpose of altering the bearing characteristics of the

¹ Lynch recites "... modification is required in the interior surface of the socket to take into account which parts of the residual limb are to carry weight, [and] which are to be relatively free of pressure.." Column 5, lines 22-25.

socket is necessary.² Thus, like Lynch, Caspers not only fails to disclose or suggest the method of claim 15, but also specifically and explicitly teaches away from the method of claim 15. For these reasons, Caspers neither anticipates nor makes obvious claim 15. As such, Applicant respectfully submits that the anticipation rejection of the claim 15 under Caspers is improper and should be withdrawn. Likewise, because claim 16 is dependant upon claim 15, for these same reasons, it follows then that claim 16 is also not anticipated by nor obvious in view of Caspers.

CONCLUSION

In view of the above, Applicant submits that this application is now in condition for allowance and notification of such is respectfully requested.

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² Caspers recites that "the positive mold of the socket 98 is milled or shaved to create a reduced positive model of the socket 102 which is necessary to create weight bearing areas and compression upon the liner against the inner cavity 91 of the liner 90 on the residual limb and upon the outer surface 92 of the liner 90 upon the socket 104." Column 9, lines 13-18.